



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

20NR-10
Job Sheet 191265

11778



Part No: 20NR-10

Job Qty: 6 pcs

Part Name: Spacer



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/25/19

Job Tracking No:

Due Date: 5/10/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG 20NR-10 Rev. 8 IPP Rev. A 18.06.15 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs		
100	Bandsaw - 1	6 pcs	5/10/19	5/10/19	0.00	1.00	Bandsaw - 1	J.C.L.
120	NV5000 - 1 - B4B	6 pcs	5/10/19	5/10/19	0.00	6.00	NV5000 - 1 - B4B	J.C.L.
							NV5000 - 2 - B4B	
130	QC 2	6 pcs	5/10/19	5/10/19	0.00	0.00	QC 2 - 1	
							QC 2 - 12	
							QC 2 - 14	
							QC 2 - 17	
							QC 2 - 19	
							QC 2 - 2	
							QC 2 - 20	
							QC 2 - 22	
							QC 2 - 23	
							QC 2 - 25	
							QC 2 - 32	J.C.L. 19-04-03
							QC 2 - 33	
							QC 2 - 35	
							QC 2 - 39	
							QC 2 - 4	
							QC 2 - 40	
							QC 2 - 44	
							QC 2 - 45	
							QC 2 - 48	
							QC 2 - 49	
							QC 2 - 50	
							QC 2 - 51	
							QC 2 - 52	
							QC 2 - 54	
							QC 2 - 56	
							QC 2 - 57	
							QC 2 - 62	
							QC 2 - 63	



Container No: S168509



Part: 20NR-10

Job No: 191265

Serial No/Batch: S168509

Revision: 8

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 04/02/19

Plex 2/25/19 3:12 PM Dart.lajeunesse.marie

140 QC 8	6 pcs	5/10/19	0.00 0.00	QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	B.A 19-04-09
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
				QC 8 - 1 (A)	
				QC 8 - 47	
150 Outsource - 4 - Anodize	6 pcs	5/10/19	0.00 0.00		04/07/2019 PL
160 Packaging 2-1 - Receive - B4B	6 pcs	5/10/19	0.00 0.00	Packaging 2 - 1 - B4B	
9 pcs				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	

170 QC 6	6 pcs	5/10/19	0.00 0.00	Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
				QC 6 - 42	DAS
				QC 6 - 9	APR 17 2019 40
				QC 6 - 68	9-89
180 Packaging 3-2 - Stock - B4B	6 pcs	5/10/19	0.00 0.00	QC 6 - 61	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	DAS
				Packaging 3 - 7 - B4B	28
				Packaging 3 - 8 - B4B	9-89
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
190 QC 21 - SA	6 pcs	5/10/19	0.00 0.00	QC 21 - SA - 21	DAS
				QC 21 - SA - 70	21
				QC 21 - SA - 53	9-89

Part Op 100 - (Bandsaw)1- Cut ~~11.85~~ long 11.95"
 Descriptions: 120 - (MORI SEIKI VERTICAL MACHINE #1)***Face blank to 5.00"X11.85"*** 1-Machine as per folio FC 683 FOLIO
 REV: AA DWG REV: 8 2-Debur
 130 - QC2- Inspect parts off machine FAI/FAIB) Engrave B/N number using Marktronic engraver as per DWG
 140 - (QC8- Inspect parts - second check
 150 - (Outsource process-Anodize per QSI017 4.1.10.1)-Issue P/O to GROUPE ALTECH; PO _____ -ANODIZE
 COLOR GOLD, PER IAW MIL-A-8625F TYPE 2 CLASS 2, Water sealant -Material type; 6061 -Certificate of Conformity is
 required
 160 - (Receive & Inspect for Damage & Mat'l Certs)Receive
 170 - QC6- All purchased or subcontracted products)
 180 - Identify as per dwg & Stock Location: _____)Identify and Stock
 190 - (QC21- Final Inspection - Work Order Release)

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
M6061T6B1.500X6.000	6061T6 Bar 1.500 X 6.00 1.750 x 6.000	5.9400 ft (.99 ea)	100-Bandsaw - 1	5166720
Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	M6061T6B1.500X6.000	6	0	0
Part Specifications				
Specifications could not be found.				

Plex 2/25/19 3:12 PM Dart.lajeunesse.marie

DART AEROSPACE LTD		Work Order:	191265
Description: Spacer		Part Number:	20WA-10
Inspection Dwg: 20-WA	Rev: 8	Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
11.75	± 0.010	11.780	✓		Caliper	
5.08	± 0.010	5.000	✓			JCL-08
$\varnothing 0.500$	± 0.005	0.504	✓			
1.000	± 0.005	1.000	✓			
0.875	± 0.005	0.875	✓			
1.850	± 0.005	1.850	✓			
4.200	± 0.005	4.200	✓			
8.000	± 0.005	8.000	✓			
11.230	± 0.005	11.231	✓		H.G.	
3.390	± 0.005	3.389	✓			
$\varnothing 0.375$	± 0.005	0.374	✓		Pin Gauge	
6.375	± 0.005	6.375	✓		Caliper	
2.075	± 0.005	2.075	✓			
$\varnothing 0.251$	± 0.005	0.251	✓		Pin Gauge	
1.729	± 0.005	1.729	✓		caliper	JCL-08
0.875	± 0.005	0.875	✓			
7.133	± 0.005	7.137	✓			
$\varnothing 0.125$	± 0.005	0.125	✓		Pin Gauge	
3.600	± 0.005	3.602	✓		Caliper	
1.875	± 0.005	1.875	✓			
1.500	± 0.005	1.500	✓			
$\varnothing 0.88$	± 0.010	0.875	✓			
$\varnothing 0.180$	± 0.005	0.180	✓			
0.638	± 0.010	0.630	✓			
0.560	± 0.010	0.553	✓			
0.515	± 0.005	0.513	✓			
0.58	± 0.010	0.580	✓			
0.53	± 0.010	0.530	✓			
$\varnothing 0.500$	± 0.010	0.500	✓			

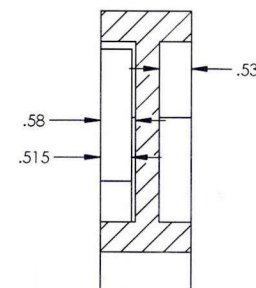
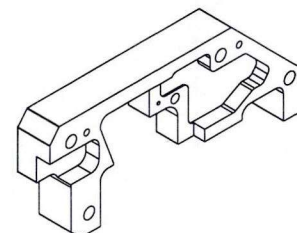
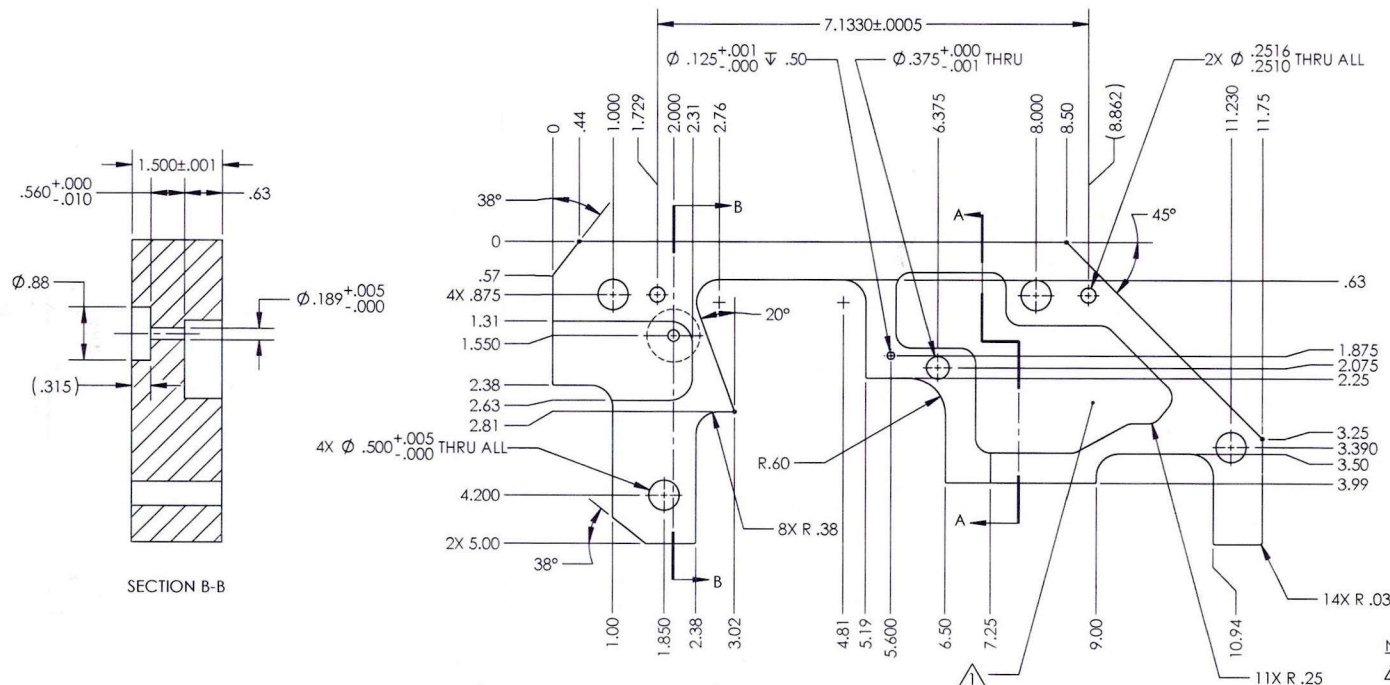
Measured by: JCL	Checked by: JCL	QC Inspector:
Date: 19-04-09	Date: 19-04-09	Date:

Engineering Approval: (If necessary)	Date:
---	-------

Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
6		AS DRAWN BY CANAM	7/22/2013	CFS
7	14-0101	CH'D TITLE BLOCK WAS RED BARN IS DART, ADDED MACHINE ENGRAVE NOTE, CH'D DIMENSION TOLERANCES ON NON-CRITICAL DIMENSIONS.	7/30/2014	DJN RW
8	16-0155	CH'D DIMS WAS .875 IS 4X .875, WAS 4X Ø.500 THRU IS 4X Ø.500 +.005 -.000 THRU ALL, DELETED DIM .875, ADDED DIMS 2X Ø.2510-.2516 THRU ALL, 1.729, (8.862), 7.1330±.0005.	9/30/2016	DPD JAG



SECTION B-B

SECTION A-A

NOTES:

1. MACHINE ENGRAVE BATCH NUMBER.
2. ANODIZE GOLD FOR 20NR, ANODIZE BLUE FOR 8NR.

USED ON
20NR
8NR

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 191265 MJS

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS
			20NR-10	1	SPACER	6061	

DART AEROSPACE	
TITLE SPACER	
DWG NO. 20NR-10	
REV 8	
MAT'L 6061	UNLESS OTHERWISE SPECIFIED
FINISH SEE NOTE 2	DIMENSIONS ARE IN INCHES
SPEC MIL-A-8625F, TYPE II, CLASS II	XXX ± .005 FRACTIONS ± 1/8
DRAWN BY: CANAM	XX ± .01 ANGLES ± 5°
CHECKED: CLOUGH	X ± .1 SURFACES ± 125/
OPPS APPR: ANDERSON	1. BREAK ALL SHARP EDGES
QA APPR: LINDSAY	2. DIMENSIONAL LIMITS APPLY
APPROVED: GILBERT	3. INTERPRET DIM AND TOL PER
	ASME Y14.5M-2009
SCALE 1:2	DATE 12/1/1995
	SHEET 1 OF 1

19-02-26

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO043150



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO043150

PO Date: 4/9/19

Due Date: 4/15/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	189386	C45-2-1	Sideplate - MRK Outsource process- Anodize per QSI017 4.1.10.1) -Issue P/O to ATG: -ANODIZE COLOR BLACK, PER IAW MIL-A-8625F TYPE 2 CLASS 2, Water sealant -Certificate of Conformity is required	Firmed - X3		4/15/19	3 pcs	0 pcs	3 pcs	\$6.00/pcs	\$18.00

APR 15 2019

DP

Line Item Note *** RUSH - RUSH - RUSH ***
PLEASE DELIVER ASAP

2	192209	C45-9-1	Clock Spring Cover -Issue P/O; -ANODIZE COLOR BLACK, PER IAW MIL-A-8625F TYPE 2 CLASS 2, Water sealant -Material type; 6061T6 -Certificate of Conformity is required	Firmed - X17		4/15/19	17 pcs	0 pcs	17 pcs	\$6.00/pcs	\$102.00
---	--------	---------	---	-----------------	--	---------	--------	-------	--------	------------	----------

APR 15 2019

DP

Line Item Note *** NEED BACK APRIL 18,2019 ***



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO043150



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	190534	RBW109-3130-34-1-3	Rod, Ø2-5/8 X 11-1/2 -Issue P/O; -ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1, Water sealant -Material type; 6061T6 -Certificate of Conformity is required	Firmed X4	-	4/15/19	4 pcs	0 pcs	4 pcs	\$30.00/pcs	\$120.00
APR 15 2019 DP											

Line Item Note *** NEED BACK APRIL 18,2019 ***

4	192395	RB877212-08-21	Cap, Ø2 x 1-3/8 -Issue P/O; -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Material type; 6061T6 -Certificate of Conformity is required	Firmed X6	-	4/15/19	6 pcs	0 pcs	6 pcs	\$20.00/pcs	\$120.00
APR 15 2019 DP											

Line Item Note *** NEED BACK APRIL 18,2019 ***



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO043150



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
5	190616	20NR-10	Spacer (note: please use the BLUE ones with 8NR and the GOLD ones with 20NR) (Outsource process-Anodize per QSI017 4.1.10.1)-Issue P/O to GROUPE ALTECH; PO -ANODIZE COLOR GOLD, PER IAW MIL-A-8625F TYPE 2 CLASS 2, Water sealant -Material type; 6061 -Certificate of Conformity is required	Firmed X1	-	4/15/19	1 pcs	0 pcs	1 pcs	\$12.00/pcs	\$12.00
Line Item Note *** NEED BACK APRIL 18,2019 ***											
	191265			Firmed	-	4/15/19	9 pcs	0 pcs	9 pcs	\$12.00/pcs	\$108.00
Sub Total:							10	0	10		\$120.00
Grand Total:										\$480.00	

DAS
40
9-89

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 4/10/19 8:40 AM dart.Lussier.Patrick



Certificat de Conformité / Certificate of Compliance



0 1 8 3 6 3 - 1

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

018363- 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
11-Apr-2019		SVETLANA DORZHIYEVA			043150			
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	C45-2-1 Rev.	C45-2-1 01 -ANO-BLACK [ANODIZE BLACK] MIL-A-8625F TYPE 2 CLASS 2	ANODIZE CH	3	3	0	0	0
2	C45-9-1 Rev.	C45-9-1 01 -ANO-BLACK [ANODIZE BLACK] MIL-A-8625F TYPE 2 CLASS 2	ANODIZE CH	17	17	0	0	0
3	RBW109-3130-34-1-3 Rev.	RBW109-3130-34-1-3 01 -ANO-CLEAR [ANODIZE CLEAR] MIL-A-8625F TYPE 2 CLASS 1	ANODIZE CH	4	4	0	0	0
4	RB877212-08-21 Rev.	RB877212-08-21 01 -ANO-RED [ANODIZE RED] MIL-A-8625 TYPE 2 CLASS 2	ANODIZE CH	6	6	0	0	0
5	20NR-10 Rev.	20NR-10 01 -ANO-GOLD [ANODIZE GOLD] MIL-A-8625F TYPE 2 CLASS 2	ANODIZE CH	1	1	0	0	0
6	20NR-10 Rev.	20NR-10 01 -ANO-GOLD [ANODIZE GOLD] MIL-A-8625F TYPE 2 CLASS 2	ANODIZE CH	9	9	0	0	0

DAS
40
9-89

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

[Signature]

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.